

Claims

- [c1] A physical barrier for an orifice in a panel member, comprising:
a plastic carrier having a peripheral edge;
a patch adapted to adhere to said plastic carrier and the panel member; and
wherein said patch is attached to at least a portion of said plastic carrier and encapsulates said peripheral edge.
- [c2] The physical barrier of claim 1, wherein said patch is configured to seal an interface between said plastic carrier and the orifice upon being heat-activated.
- [c3] The physical barrier of claim 2, wherein a portion of said patch is disposed between said plastic carrier and the panel member to seal the plastic carrier and the orifice upon being heat-activated.
- [c4] The physical barrier of claim 1, wherein said carrier is adapted to be attached to said panel member.
- [c5] The physical barrier of claim 4, further comprising one or more snap-fit fasteners mounted on said carrier and adapted to attach said carrier to said panel member.

- [c6] The physical barrier of claim 5, wherein said snap-fit fasteners include a protrusion defining said peripheral edge of said plastic carrier and having a bottom surface, said patch is wrapped around said protrusion to encapsulate said peripheral edge and is attached to said bottom surface.
- [c7] The physical barrier of claim 5, wherein said snap-fit fasteners include a lip defining said peripheral edge of said plastic carrier and having a bottom surface, said patch is wrapped around said lip to encapsulate said peripheral edge and is attached to said bottom surface.
- [c8] The physical barrier of claim 5, wherein said fasteners are a plurality of S-shaped clips.
- [c9] The physical barrier of claim 8, wherein said S-shaped clips include a tail defining said peripheral edge of said plastic carrier and having a bottom surface, said patch is wrapped around said tail to encapsulate said peripheral edge and is attached to said bottom surface.
- [c10] The physical barrier of claim 1, wherein said patch comprises 10–40 wt % ethylene–vinyl acetate (EVA), 5–35 wt % styrene butadiene rubber (SBR), 5–22 wt % talc, 10–45 wt % mica, and 10–30 wt % tall oil rosin.

- [c11] The physical barrier of claim 8, wherein said patch comprises 29 wt % EVA, 16 wt % SBR, 12 wt % talc, 26 wt % mica, and 17 wt % tall oil rosin.
- [c12] A method of sealing an orifice in a panel member, comprising:
joining a patch made of a heat-activated material to a portion of a plastic carrier such that the patch encapsulates a peripheral edge of the plastic carrier;
attaching the plastic carrier to the panel member; and
adhering the plastic carrier to the panel member with a portion of the patch disposed between the plastic carrier and the panel member.
- [c13] The method of sealing an orifice of claim 12, wherein the heat-activated material of the patch comprises 10–40 wt % ethylene–vinyl acetate (EVA) and 5–35 wt % styrene butadiene rubber (SBR), with the balance comprising fillers of talc, mica and tall oil rosin.
- [c14] The method of sealing an orifice of claim 13, wherein the heat-activated material of the patch comprises fillers of 5–22 wt % talc, 10–45 wt % mica, and 10–30 wt % tall oil rosin.
- [c15] The method of sealing an orifice of claim 13, wherein the heat-activated material of the patch comprises 29 wt %

EVA, 16 wt % SBR, 12 wt % talc, 26 wt % mica, and 17 wt % tall oil rosin.

- [c16] The method of sealing an orifice of claim 12, wherein the heat-activated material of the patch comprises 10–40 wt % ethylene–vinyl acetate (EVA), 5–35 wt % styrene butadiene rubber (SBR), 5–22 wt % talc, 10–45 wt % mica, and 10–30 wt % tall oil rosin.
- [c17] The method of sealing an orifice of claim 12, wherein joining the patch to the plastic carrier includes vacuum-forming the patch to the plastic carrier to encapsulate the peripheral edge of the carrier.
- [c18] The method of sealing an orifice of claim 12, wherein adhering the plastic carrier to the panel member includes heating the patch such that the heat-activated material of the patch generally flows.
- [c19] The method of sealing an orifice of claim 18, wherein heating the patch includes heating at a temperature of about 175° Fahrenheit to about 400° Fahrenheit.
- [c20] The method of sealing an orifice of claim 18, further including the step of curing the heat-activated material of the patch to form a seal between the interface of the plastic carrier and the panel member such that a portion of the patch is disposed between the plastic carrier and

the panel member.